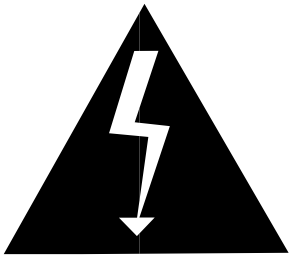
SYNERGY

SYN201R

INSTRUCTION MANUAL

Congratulations on your purchase of the Synergy SYN-20IR amplifier. The SYN-20IR is the culmination of years of refining and fine tuning our innovative modular concept. It is loaded with lots of cool, useable features and is easy to operate. Please read the entire manual to familiarize yourself with this amp.



IMPORTANT
SAFETY WARNING
DANGEROUS VOLTAGE PRESENT

1. The Synergy modular products must never be operated without modules installed in all slots without covering the unused slots.

2. Slots without modules must be covered with a blank cover panel, available from Synergy Amps.

3. Never place your hand or any other object inside an open module slot for any reason!

4. If a foreign object does accidentally fall inside an open slot, immediately turn the main power off and UNPLUG THE AC POWER CORD. Tip the unit forward to get the object to fall forward and out of the slot. Do not stick your fingers into the slot to reach it.

5. If the foreign object has fallen inside and you cannot see the object, do not stick your hand into the slot to search for it. Take the unit to a qualified service technician to safely remove it.

Failure to heed the above warnings can result in personal injury or death. We want you to enjoy your Synergy Modular gear and not get hurt being foolish and failing to adhere to the warnings.

INSTRUCTIONS

Please keep this instruction manual for future reference and for the duration of owning this SYNERGY Amplifier. Please carefully read and understand the instructions inside this user's manual before attempting to operate your new amp. This instruction manual includes essential safety information regarding the use and maintenance of the amplifier. Take special care to heed all warning symbols and signs inside this manual and those printed on the amplifier itself.

WARNING!
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THE AMPLIFIER TO WATER OR MOISTURE. DO NOT OPERATE NEAR ANY WATER SOURCE.

WHAT'S THE MEANING OF THIS? The lightning flash with an arrow triangular symbol is intended to alert the user to the presence of non-insulated "dangerous voltage" within the products enclosure, and may be of sufficient magnitude to constitute a risk of electric shock

WHAT'S THE MEANING OF THIS? The exclamation point triangular symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the user manual accompanying this amplifier!

1. Read Instructions – All the safety and operating instructions should be read before this product is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the AMPLIFIER and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Water and Moisture – The AMPLIFIER should not be used near water – for example, a bathtub, washbowl, kitchen sink, laundry tub, wet basement, or near a swimming pool, and the like. 6. Heat – AMPLIFIER should be situated away from heat sources such as radiators, heat registers, stoves, or other AMPLIFIER (including AMPLIFIERs) that produce heat.
7. Power Sources – This product should be operated only from the type of power source indicated on the rating label.

If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

8. Grounding or Polarization

– This product may be equipped with a polarized alternation-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

9. Power-Cord Protection

– Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the cord in correspondence of plugs, convenience receptacles, and the point where they exit from the AMPLIFIER.

10. Cleaning – The AMPLIFIER should be cleaned only as recommended by the manufacturer. Clean by wiping with a cloth slightly damp with water.

Avoid getting water inside the AMPLIFIER.

11. Non-use Periods – The power cord of the AMPLIFIER should be unplugged from the outlet when left unused for a long period of time.

12. Object and Liquid Entry

– Care should be taken so that objects do not fall, and liquids are not spilled into the enclosure through openings. 13. Damage Requiring Service – The AMPLIFIER should be serviced by qualified service personnel when:

A. The power-supply cord or the plug has been damaged; or

B. Objects have fallen, or liquid has been spilled into the AMPLIFIER; or

C. The AMPLIFIER has been exposed to rain, or D. The AMPLIFIER does not appear to operate normally or exhibits a marked change in performance; or

E. The AMPLIFIER has been dropped, or the enclosure damaged.

F. The AMPLIFIER needs tube replacement or biasing

14. Servicing – The user should not attempt any service to the AMPLIFIER beyond that described in the operating instructions.

All other servicing should be referred to qualified service personnel.

15. Ventilation – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built- in installation such as a bookcase or rack.

16. Attachments – do not use attachments not recommended by the product manufacturer as they may cause hazards.

17. Lightning – For added protection for this product before a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power line surges.

18. Replacement Parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

19. Safety Check – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

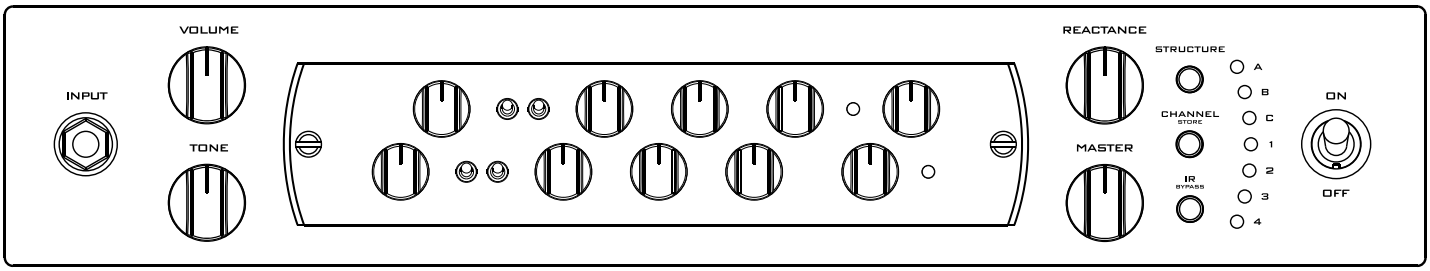
20. FUSES – Always use the correct rating and type of fuse as indicated on the rear panel. Note the proper rating fuse is determined by the AC line voltage in the country this unit is being operated.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. - Consult the dealer or an experienced radio/ TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. of the following measures: - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. - Consult the dealer or an experienced radio/ TV technician for help.

FRONT PANEL



REPLACING MODULES:

Turn the amplifier OFF mode before swapping modules.

The amplifier will not operate without a module installed.

When inserting or removing modules, simply turn both thumbscrews to the left until they fill loose. Do not remove the screw completely. Remove the module by pulling out on the thumbscrews. Slide in a new module and push in on the center knobs until flush with the front panel. Tighten the thumbscrews by turning to the right until snug.

1. **INPUT** – Plug your guitar in here using a high-quality shielded cable.
2. **VOLUME** – Controls the overall volume and gain of the clean channel.
3. **TONE** – Controls the clean channel overall Tone and brightness. Reduce for a darker, middy and punch sound. Increase it for a brighter and more present sound.
4. **REACTANCE** – Dynamic knob that controls a combination of “PRESENCE”, “DEPTH” and “SAG” based on the selected structure. Increase it for a more open and saggy sound. Decrease it for a darker, tighter sound.
5. **MASTER** – Controls the overall level of the power amp volume on the speaker. It does not affect the balanced output or headphone output.
6. **STRUCTURE (A, B, C)** – The Structure button allows you to select the power amp configuration and feedback, significantly altering the overall contour and feel of the SYN-20IR.
   - Mode A: Offers a balanced and punchy sound. If you're uncertain about which Structure mode to choose, this is a great starting point.
   - Mode B: Provides a vintage tone with relaxed mids and a bright, shimmering high end.
   - Mode C: Delivers a modern, tight feel with a solid low end and a darker high end.
7. **CHANNEL/STORE** – Push and release the button to step through the channels. LONG press this button to program the channels when the footswitch or midi controller is used. Please read the MIDI/CHANNEL SWITCHING section later in this manual.
8. **IR/BYPASS (1,2,3,4)** – Selects the desired CABINET IR preset. Long activation BYPASSES the simulation. You can load your different IRs using the SYNERGY editor software. The SYN-20IR is loaded with the following IRS:

   1 412 V30 A Handcrafted in epic purple the Soldano 412 stands ready for the stage. Fitted with the iconic Vintage 30 speaker it's a perfect pairing for Soldano tones, delivering a balanced and full bodied sound for any style. Mics used SM57 & 1973.

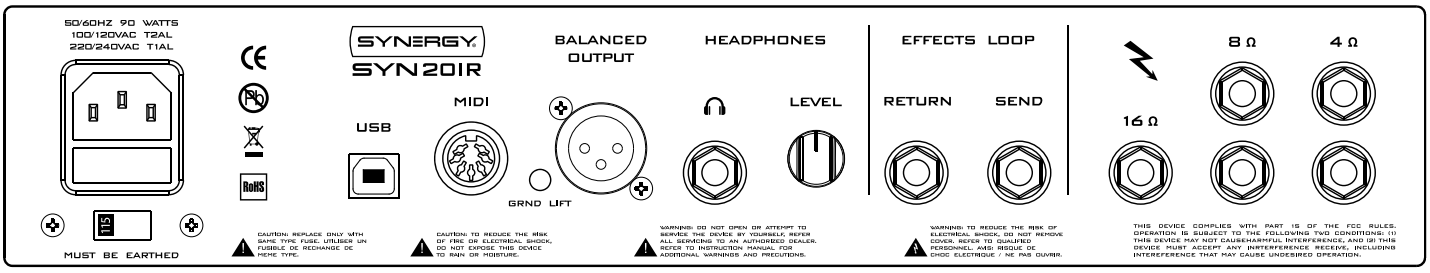
   2 412 V30 B Handcrafted in epic purple the Soldano 412 stands ready for the stage. Fitted with the iconic Vintage 30 speaker, it has a more pronounced top and bottom end, perfect for heavier tones. Mics used SM57 & R-121.

3 UK 412 V30 This British 4x12 cabinet is a classic closed back cab with Baltic birch, tongue and groove construction. It features a balanced V30 tone great for any style of music. Mics used SM57 & R-121.

4 1x12 CLOSED Captured from the Soldano snakeskin closed back 1x12 cabinet. The high wattage Redback speaker delivers a broad full sound that is balanced and versatile. Mic used SM57 & R-121.

9. **POWER/ON SWITCH** - Main AC power switch. The amplifier will slowly ramp the voltage to the optimum level for prolonged tube life. Please allow the tubes to warm up for a few minutes before playing.
    a Important - ALWAYS set the master level to zero before powering ON and slowly turn the master up to avoid excessive sound pressure level (SPL) on your ears.

REAR PANEL



1. **AC Mains Input** – Connect to a grounded outlet in accordance with the voltage and frequency specified on the rear panel of the amplifier. Use only the factory supplied power cord.
2. **MAINS FUSE** – Protects the amplifier from further damage in case of an electrical fault.

   Use only the factory supplied cord or a UL approved equivalent type.
   a. **Warning!** Replace only with same fuse type and correct rating when changing voltage.
3. **AC SELECTION SWITCH** – Selects between 230V and 115V. Use 230V for 220V-240V and 115V for
   a. 100V-120V AC line wall voltage.
   b. **Warning!** Replace only with same fuse type and correct rating when changing voltage.
4. **FOOTSWITCH/MIDI IN** – Midi connector to control the SYN-20IR amplifier with an external MIDI device or the provided 3-button footswitch. (Default channel is OMNI).
   12V 200mA Phantom Power provided when using 7 PIN Midi connector on pin 6 (+) and 7 (-).
5. **USB** – USB connector for software update and SYNERGY software editor remote programming.
6. **BALANCED OUTPUT** – XLR output used to send your SYN-20IR tone straight to the mixing board or active cabinet.
7. **GROUND LIFT** – This switch enables or disables the ground connection on the BALANCED OUT to eliminate possible ground loops.
8. **HEADPHONES** – Headphones connector.

   Warning! ALWAYS lower the headphones volume level before wearing the headphones and slowly increase the volume to the desired level to avoid too much sound pressure level (SPL) on your ears.
9. **HEADPHONES LEVEL** – Adjusts the headphones volume level.
10. **RETURN** – Use a high-quality shielded guitar cable to connect from the output of your effects unit to the return of the amp.
11. **SEND** – Use a high-quality shielded guitar cable to connect to the input of your effects unit.
12. **SPEAKERS** – 1x 16 ohm, 2x8 ohm and 2x 4 ohm speaker connections allowing you to use different speaker combinations including:

    Single 16 ohm cabinet -> 1x16 ohm
    Single 4 ohm cabinet -> 1x4 ohm
    Single 8 ohm cabinet -> 1x8 ohm
    Dual 16 ohm cabinet -> 2 x 8 ohm
    Dual 8 ohm cabinet -> 2x4 ohm

13. **CAB-LESS OPERATION** – To use the amp without a cabinet, completely remove ANY connections from all of the speaker jacks and set the MASTER volume to zero.
    Warning! Leaving the jack connected without a load will damage the amplifier or the tubes.
    Warning! Make sure the speaker cable is fully plugged in, to avoid malfunctions and possible damage (2 clicks).

MIDI/CHANNEL SWITCHING

The SYN-20IR is compatible with most MIDI controllers on the market. You can set up 128 different presets, each of which can recall a different channel on the amp.

CONNECTIONS

MIDI IN – This is where you connect the output from your MIDI controller. The connector is 7 pin, but it can also accept a standard 5 pin MIDI cable. 7 pin cables are only used with MIDI devices that accept phantom power over pins 6 and 7. If your MIDI device has a 5-pin MIDI connector, it doesn't accept phantom power and must be powered with its own power supply. The MIDI IN port can provide 12VDC at up to 200mA.

SETUP

Out of the box, the SYN-20IR is set up to receive MIDI program changes on MIDI channel OMNI. You can change the MIDI channel using the free Synergy editor software.

PROGRAMMING

Midi can be programmed either by the included free Synergy Editor software, or using manual mode. Refer to **PROGRAMMING THE FOOTSWITCH** section for manual midi programming mode.

Continuous Controllers

The SYN-20IR also responds to MIDI continuous controller (CC) messages. These MIDI messages are typically used for "instant access" buttons on more advanced MIDI controllers – buttons that can be set up to directly select amp channels. When using CC messages, you don't need to go through the programming process described above.

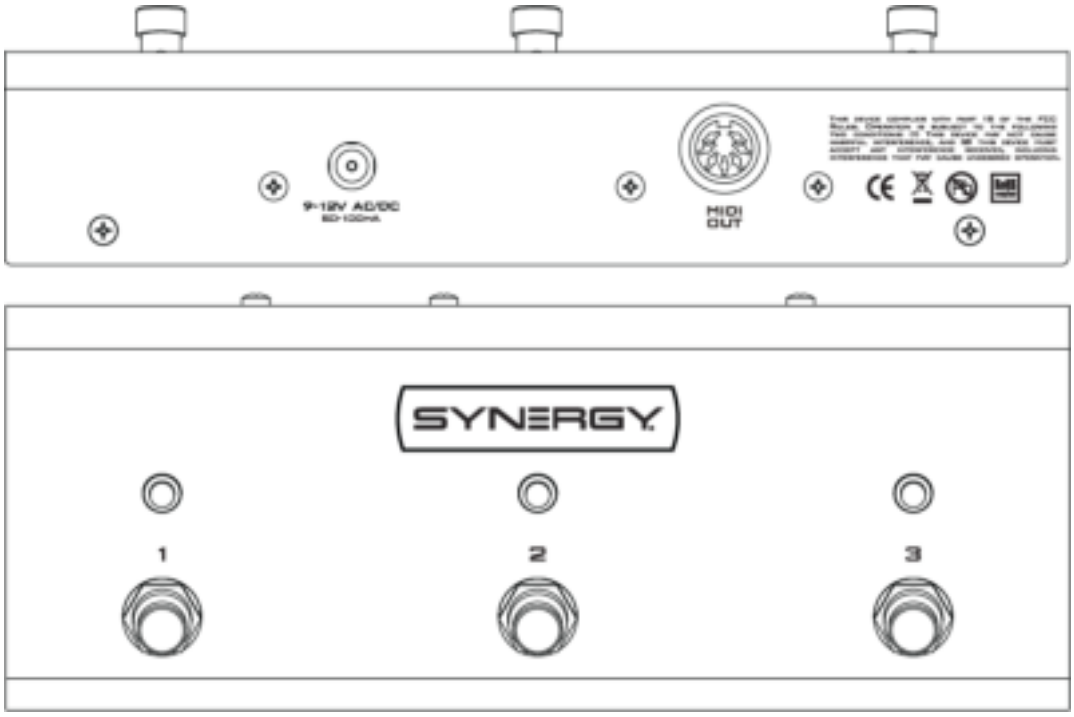
CC Number	Value	Function
24	0 – 1 – 2	Select channel
25	0 – 1 - 2	Select structure
27	0: OFF, 127: ON, X: Toggle	IR Bypass
28	0 – 1 – 2 – 3	Select IR
29	0 – 1 – 2	Lowpass Level
30	0 – 1 – 2	Highpass Level

INCLUDED FOOTSWITCH

SYN-20IR Includes a 3 Channel Universal MIDI footswitch.
The switches are fixed and correspond to MIDI PROGRAM CHANGE 0 to 2, on MIDI CHANNEL 1.
The footswitch is phantom powered by the SYN-20IR when using the 7 WIRE MIDI CABLE supplied. It can be powered externally when using it with a 5 WIRE MIDI CABLE or when using it with another device.

PROGRAMMING THE FOOTSWITCH

Programming the footswitch is very easy – just follow these steps:
1) Press the footswitch button you want to program.
2) Configure the SYN-20IR as you wish by selecting desired Channel, STRUCUTRE and IR.
3) To STORE, press and hold for one second the SYN-20IR Channel/Store Switch until the LEDs flashes white. Your footswitch is now programmed!
This midi pedal can also operate from any power supply that puts out 9 to 12 volts AC or DC and has a current rating of at least 50 milliamps.



SYNERGY EDITOR SOFTWARE

Please visit **www.SYNERGRYAMPS.com** to download the Synergy Editor software.

The SYN-20IR features easy-to-use software that allows you to upload your own IR'S, program all MIDI presets and MIDI functionalities.

INCLUDED IR'S

1x12 OPEN

Captured from the Soldano snakeskin open back 1x12 cabinet. The high wattage Redback speaker delivers a broad full sound that is balanced and versatile. Mic used Soyuz 1973

1x12 CLOSED

Captured from the Soldano snakeskin closed back 1x12 cabinet. The high wattage Redback speaker delivers a broad full sound that is balanced and versatile. Mic used SM57 & R-121

THIELE 1x12 EV

Captured from a Thiele spec 1x12 cabinet fitted with a vintage EV12L.This tight cabinet delivers perfectly balanced clean tones as well as classic 80's rock tones.Mics used SM57 & Soyuz 1973

412 V30 A

Handcrafted in epic purple the Soldano 412 stands ready for the stage. Fitted with the iconic Vintage 30 speaker it's a perfect pairing for Soldano tones, delivering a balanced and full bodied sound for any style. Mics used SM57 & 1973

412 V30 B
Handcrafted in epic purple the Soldano 412 stands ready for the stage. Fitted with the iconic Vintage 30 speaker, it has a more pronounced top and bottom end, perfect for heavier tones. Mics used SM57 & R-121

412 GB
Classic Soldano 412 cabinet loaded with British 20w Greenbacks. Featuring an open sound with plenty of classic brown flavor. Mics used SM57 & R-121

VINT 412 V30
Classic vintage Soldano 412 cabinet loaded with V30 speakers. This cab provides a classic, balanced and open tone. Mics used SM57 & R-121

VINT 412 X1200
Classic vintage Soldano 412 cabinet loaded with X12000 speakers. This cab provides a smooth, punchy and warm response. Mics used SM57 & R-121

412 LEGEND
The legendary and infamous tweed Soldano SLO 412 TWEED cabinet that was built for Stevie. It is loaded with Legend speakers. Mic used SM57

UK 412 V30
This British 4x12 cabinet is a classic closed back cab with Baltic birch, tongue and groove construction. It features a balanced V30 tone great for any style of music. Mics used SM57 & R-121

UK 412 V30 GB
This British 1960 cabinet features a complimentary combination of two Greenbacks and two V30s. Mics used SM57 & SM57 & R-121

UK 412 JBL120 GB
A vintage British 4x12 loaded with UK Greenbacks and a pair of JBL 120 speakers for a classic retro combination. Mics used SM57 & SM57

412 RECT
This iconic combination of Vintage 30 speakers in an oversized cabinet quickly became a mainstay in heavy music. It works equally well for full bodied clean and dirty tones alike and has a characteristic tight and gritty cut. Mic used SM57

TOP PANEL CONTROLS

- LEFT CONNECTION indicates the connection status of the SYN-20IR.
- PROGRAM CHANGE selector lets you navigate through all the 128 storable MIDI PROGRAM CHANGES available and their corresponding settings. This will actively interact with the connected SYN-20IR and switch presets on the amplifier as well.
- CHANNEL button lets you select the current channel.
- STRUCTURE button lets you select the current structure.
- IR BYPASS – this bypassed the internal IR cabinet simulation allowing you to use external simulation devices or software.
- MIDI CHANNEL SELECTOR will program the MIDI INPUT channel the SYN-20IR will use. Default is OMNI mode (SYN-20IR will listen to all channels).

  INCLUDED FOOTSWITCH MIDI CHANNEL IS 1

SIDE PANEL CONTROLS

- STORE ICON stores all of the changes made to all of the presets inside the unit. MAKE SURE TO STORE ANY CHANGE before powering down SYN-20IR.
- LOWPASS ICON lets you select between 3 different levels of lowpass for the IR section.
- HIGHPASS ICON lets you select between 3 different levels of highpass for the IR section.
- IR SELECTOR (PER CHANNEL) lets you select one of the 6 slot-loaded IR'S for the selected channel.
- IR LOADING (PER SLOT) folder button lets you load your preferred IR by simply selecting it. Supported format are WAV 44.1K to 96K.
- ADDITIONAL INCLUDED IR SELECTION (PER SLOT) plus button lets you scroll through the additional IR's preloaded within the software. Press SELECT to use the current IR or press AUDITION to automatically load while scrolling the list.
- MIDI CC LIST Opens a software tab that shows the lists of supported MIDI CC commands.

FIRMWARE UPDATES

SYN-20IR Software will automatically check for amplifier firmware update using internet connection.

SYNERGY LIMITED THREE (3) YEAR WARRANTY

Thank you for choosing SYNERGY. SYNERGY takes great pride in an extremely thorough testing procedure which is implemented on each product prior to shipment. In the unlikely event that you have a problem with your Synergy product, please refer to warranty below.

AMPLFIER: SYNERGY offers a limited Three (3) Year warranty to the original purchaser that this SYNERGY product will be free from defects in material and workmanship. A dated sales receipt will establish coverage under this warranty, PLEASE KEEP YOUR PROOF OF PURCHASE TO USE YOUR WARRANTY. This warranty does not cover service or parts to repair damage caused by accident, neglect, abuse, normal & wear, disaster, misuse, abuse, over-powering, negligence, inadequate packing or shipping procedures and service, repair or any modifications to the product which have not been authorized or approved by SYNERGY in writing. **ANY MODIFICATION TO THE AMPLIFIER WILL VOID YOUR WARRANTY**. If this product is defective in materials or workmanship as warranted above, your sole remedy shall be repair or replacement by SYNERGY as provided below.

CAUTION: Do NOT attempt to repair, modify, or service this Synergy product by yourself!!! Please read the instruction manual for all safety notifications, warnings, and instructions. SYNERGY utilizes tubes with extremely high voltages that can cause serious injury or death. Do not remove the chassis cover from the amplifier. All repair and service work must be performed by SYNERGY or an authorized service center of SYNERGY. ANY UNAUTHORIZED REPAIRS WILL VOID YOUR WARRANTY.

TUBES: SYNERGY warrants the original purchaser that the specific tubes used in this SYNERGY product will be free from defects in material and workmanship for a period of 90 days from the original date of purchase. A dated sales receipt will establish coverage under this warranty. This tube warranty will automatically terminate 90 days after the original retail sales date. This tube warranty is in lieu of all other expressed warranties. If tubes fail within the 90-day warranty period, your sole remedy shall be replacement of tubes as provided below.

RETURN PROCEDURES: In the unlikely event that a defect occurs please email support@SynergyAmps.com. A member of our staff will email you a response in a timely manner. Please include your phone number in case our customer service department needs to reach you. In most cases we can help you diagnose the problem over the phone. If a product must be sent to us, please follow the procedure outlined below.

- Defective products must be shipped, together with proof of purchase, freight pre-paid and insured to the Authorized SYNERGY Service Center or directly to SYNERGY.
- If a product must be returned to SYNERGY for warranty replacement/repair, a Return Authorization Number must be obtained from our Customer Service Department prior to shipping the product.
- Please contact SYNERGY Customer Service Department for the Authorized SYNERGY Service Center nearest you.
- Products must be shipped in their original packaging or its equivalent; in any case, the risk of loss or damage in transit is to be borne by the purchaser.

- Please send to:
  SYNERGY
  5300 Harbor St
  Commerce, CA 90040
- The Return Authorization Number must appear in large print directly below the shipping address.
- Always include a brief description of the defect, along with your correct return address and telephone number.
- When emailing to inquire about a returned product, always refer to the Return Authorization Number.

If SYNERGY determines that the unit was defective in materials or workmanship at any time during the warranty period, SYNERGY has the option of repairing or replacing the product at no additional charge, except as set forth below.

- All replaced parts become a property of SYNERGY. Products replaced or repaired under this warranty will be returned via ground shipping within the United States or Canada - freight prepaid.
- SYNERGY is not responsible for costs associated with expedited shipping, either to SYNERGY or the return of the product to the customer.

All warranty repairs outside the United States and Canada must be directed to the dealer or distributor from which you purchased the product.

INCIDENTAL OR CONSEQUENTIAL DAMAGE: In no event will SYNERGY be liable for any incidental or consequential damages arising out of the use or inability to use of any SYNERGY product, even if a SYNERGY dealer has been advised of the possibility of such damages, or any other claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

FOR YOUR PROTECTION: Please complete the warranty registration card within (10) ten days of the date of purchase so that we may contact you directly in the event a safety notification issued in accordance with the 1972 Consumer Product Safety Act.

CUSTOMER SUPPORT: Our dedicated and friendly staff is ready to help you with any warranty or product questions you may have. Please email us at Support@BoutiqueAmpsDistribution.com

Thank you again for choosing SYNERGY and we look forward to a long relationship!

SYNERGY

www.SynergyAmps.com